

CLAIMS

Please enter the following claim modifications.

1. – 38. (cancelled)

39. (currently amended) An annular prosthesis for a heart valve having a valve annulus with an annulus perimeter, the annular prosthesis comprising:

a chain having a plurality of links having ends directly, flexibly coupled to each other to form a full, continuous ring having a constant ring perimeter, the ring being moldable for attachment to the annulus perimeter and configured to be three-dimensionally deformable,

wherein upon implantation, the prosthesis can augment the valve annulus by changing its shape and dimension to be closer to or approximate the shape and dimension of a previous state ~~reinstate the proper shape and dimensions of the valve annulus~~, the prosthesis ~~implanted~~ configured to be implantable without necessity of suture stabilizers or placcation bands.

40. (previously presented) The annular prosthesis of Claim 39, wherein upon implantation, the prosthesis generates a saddle-shaped geometry and deforms three-dimensionally, while retaining an approximately constant three-dimensional perimeter.

41. (previously presented) The annular prosthesis of Claim 40, wherein upon implantation, the prosthesis has a saddle height to commissural diameter ratio in the range from approximately 0 to approximately 1/3.

42. (previously presented) The annular prosthesis of Claim 39, wherein upon implantation, the prosthesis retains an approximately constant three-dimensional perimeter, with a maximum variation in perimeter of less than approximately 10%.

43. (currently amended) The annular prosthesis of Claim 42, wherein the maximum variation in perimeter is not greater less than approximately 3%.

44. (currently amended) The annular prosthesis of Claim 39, wherein upon implantation, the prosthesis ~~reduces forces applied to one of a strut chord or an intermediate chord, said chords being associated with the valve. maintains a normal chordal force distribution as its bending is dominated by its mechanical environment.~~

45. (currently amended) An annuloplasty ring for attachment to a heart valve having a valve annulus, the ring comprising:

a prosthesis, wherein upon implantation, the prosthesis ~~maintains a normal chordal force distribution during the cardiac cycle as its bending is dominated by its mechanical environment~~ reduces forces applied to one of a strut chord or an intermediate chord, said chords being associated with the valve;

and wherein the prosthesis comprises a chain having a plurality of links having ends directly coupled to each other to form a full, continuous ring having a constant ring perimeter, the ring being moldable for attachment to the annulus perimeter and configured to be three-dimensionally deformable.

46. (currently amended) An annuloplasty ring for a heart valve comprising a prosthesis, wherein upon implantation, generates a saddle-shape geometry, and deforms three-dimensionally, while retaining an approximately constant three-dimensional perimeter;

and wherein the prosthesis comprises a chain having a plurality of links having ends directly coupled to each other to form a full, continuous ring having a constant ring perimeter, the ring being moldable for attachment to the annulus perimeter and configured to be three-dimensionally deformable.

47. (previously presented) The annuloplasty ring of Claim 46, wherein the prosthesis has a saddle height to commissural diameter ratio in the range from approximately 0 to approximately 33%.

48. (previously presented) The annuloplasty ring of Claim 47, wherein the prosthesis has a saddle height to commissural diameter ratio of approximately 25%.

49. (currently amended) A supporting prosthesis for repairing pathological alterations of valves of the heart **having at least one valve annulus, the supporting prosthesis** comprising:

a chain having a plurality of links **having ends directly coupled to each other to form a full, continuous ring, the ring being moldable for attachment to the annulus perimeter and configured to be three-dimensionally deformable; and**

shaping means, wherein upon implantation to annulus tissue, the chain generates a variable saddle-shaped geometry during the cardiac cycle, and deforms three-dimensionally **while maintaining a constant perimeter**, to reconstruct the shape of a valve, while maintaining the dynamics of the valve **through appropriate via flexing and bending** as to allow the valve to thereafter function correctly.

50. (currently amended) The supporting prosthesis of Claim 49, wherein upon implantation, the **prosthesis [[chain]] reduces forces applied to one of a strut chord or an intermediate chord, said chords being associated with the valve, maintains a normal chordal force distribution as its bending is dominated by its mechanical environment.**

51. – 60. (cancelled)